1/8 4WD OFF-ROAD, PRO VERSION COMPETITION BUGGY
1:8 引擎競速越野車



No.6227-F

This radio control model car is not a toy! Before beginning operation, please read this manual thoroughly.
本產品為高性能模型非一般玩具，操作前請詳閱本產品說明書。

The contents are subject to change without prior notice due to product improvements and specificatrion changes.
本套件所附之零件可能跟圖示有所差異。因產品後續之設計研發或功能不斷改善之原因，我們將保留產品規格變更權力，不再另行通知使用者。

Instruction Manual
操作說明書

WARRANTY 品質保證事項

Thunder Tiger Corporation guarantees this model kit to be free from defects in both material and workmanship. The total monetary value under warranty will in no case exceed the cost of the original kit purchased. This warranty does not cover any components damaged by use or modification. Part or parts missing from this kit must be reported within 60 days of purchase. No part or parts will be sent under warranty without proof of purchase. To receive part or parts under warranty, the service center must receive a proof of purchase and/or the defective part or parts. Should you find a defective or missing part, contact the authorized Thunder Tiger Service/Distributor nearest you. Under no circumstances can a dealer or distributor accept return of a kit if assembly has started.

本公司對於製造過程中產生之瑕疵，負完全品質保證責任。
保證事項僅限於產品本身與隨產品所附之零配件。
品質保證不包含下列事項
因使用、組裝或調整本產品所發生之損壞。
其他所有非產品本身品質所造成之損壞。

INTRODUCTION 前言

Thank you for your purchase of this Thunder Tiger product. You should enjoy many hours of fun and excitement from this advanced R/C model. Thunder Tiger strives to bring you the highest level of quality and service we can provide. We race and test our cars around the world to bring you state-of-the-art products.

We offer on-line help on our www.acehobby.com or www.thundertiger.com forum and our product specialists are ready to take your call if you have any technical questions. Please read all instructions and familiarize yourself with the systems and controls of this model before running. Have fun and enjoy the exciting world of R/C!

感謝您購買雷虎科技EB4 S2引擎動力四驅越野車。雷虎科技以提供最高品質的產品及服務作為持續努力的目標。並藉由參與競賽及重覆測試產品，不斷累積經驗，進而提昇設計及製造品質，期望能呈現給您最頂級之工藝產品。本使用說明書包含了操作本產品前所需注意的重要事項，建議您在開始準備及操作本產品之前，能詳閱此說明書，並熟悉本產品之操控系統。若是您在產品的操作及使用上有任何的疑問，歡迎多加利用我們所提供的24小時諮詢留言版或洽詢雷虎科技授權經銷商。雷虎科技的全球網址為www.thundertiger.com 我們將竭誠為您服務！

CAUTION 注意事項

Thank you for purchasing a Thunder Tiger Product.

Please read all instructions and familiarize yourself with the products and controls before operation.

1. This product is not a toy. It is a high performance model product. It is important to familiarize yourself with the model, its manual, and its construction before assembly or operation. A child operating under the supervision of the adults is necessary.
2. Always keep this instruction manual ready at your hand for your assembling and operating reference, even after completing the assembly.
3. Make sure all the screws are properly tightened and all the parts are checked after running the car for a long period of time.
4. For the best performance, it is important to make sure all the moveable parts work free without binding.
5. Do not operate model products in rain, on public roads, near crowds, near airport, or near areas with restricted radio operation.
6. Always keep fuel away from heat and open flame. Only operate in open, well-ventilated area. Store fuel in cool, dry area. Keep the fuel bottle cap tightly closed. Clean up any leak or excess fuel before starting the engine.
7. This product, its parts, and its construction tools can be harmful to your health. Always exercise extreme caution when assembling and/or operating this product. Do not touch any part of the model that rotates.
8. Check your radio frequency with the proper operating frequency of the area or country. Always check to see if there are any modelers operating on the same frequency as yours. Also, check your radio for proper operation before operating a model.

感謝您購買雷虎科技產品，在您開始操作本產品前，請詳閱本產品說明書。

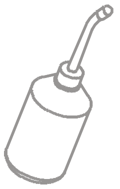
1. 本產品為高性能模型產品非一般玩具，組裝與操作過程皆須由成人陪同。請詳讀此本使用說明書，避免因組裝錯誤與操作不當造成損壞。
2. 請妥善保管此說明書，對於後續維修、操控說明將可提供您協助。
3. 請定時巡檢車輛上之所有螺絲是否鎖緊，零件是否鬆動。
4. 請檢視所有活動部位零件是否不受干涉，可靈活作動，以達到車輛最佳性能。
5. 請勿於雨天、公衆空間、道路、機場附近與其他限制遙控模型活動區域，操控本項產品。
6. 遙控模型專用燃料，具相當高的揮發性與低燃點特性，請您於使用或儲存時遵照使用燃油之相關規定；使用時必須遠離火源，儲藏時必須避免日曬並放置於乾燥陰涼處，以及兒童無法取得處。
7. 此項產品具有相當之危險性，於組裝、調整、操控上的不熟悉都可能造成自身或他人的傷害，當發生這些傷害事件時製造商是可以免除責任的，建議您於初次使用本產品前，先行請教具有相當程度經驗同好或是專業雷虎經銷商與模型專賣店。
8. 請您確認您所在地區對於頻率規定之相關法規，來選用適當的頻率。避免與其他同好使用相同頻率造成失控事件。

INDEX 索引

INTRODUCTION 前言 ▸▸1
IMPORTANT NOTES & WARNING 重要注意事項 ▸▸2
ITEMS REQUIRED FOR OPERATION 周邊配件 ▸▸3
CHARGING THE GLOW PLUG IGNITER 電夾充電方式 ▸▸4
INSTALLING TIRES 輪胎安裝 ▸▸4
RADIO BATTERY INSTALLATION 遙控器電池安裝 ▸▸4
THE ACE RC COUGAR PS3 2.4GHz RADIO SYSTEM 熟悉2.4GHz電控系統 ▸▸5
TRANSMITTER CONTROLS 發射機各部功能簡介 ▸▸6
BINDING PROCESS 安全校頻配對（鎖碼）▸▸7
FAIL SAFE(F/S) FUNCTION SETTING 安全回復功能設定 ▸▸8
RADIO OPERATION 遙控器操作 ▸▸10
OPERATING RADIO STEERING FUNCTION 遙控器設定－轉向 ▸▸10
OPERATING RADIO THROTTLE/ BRAKE FUNCTION 遙控器設定－油門、中立、煞車 ▸▸11
ADJUSTING THROTTLE / BRAKE LINKAGE 油門、煞車連桿調整 ▸▸11
ADJUSTING CARBURETOR 化油器調整 ▸▸12
FUELLING 燃油的添加 ▸▸12
PREPARING THE ENGINE FOR STARTING 引擎整備工作 ▸▸13
STARTING THE ENGINE 發動引擎 ▸▸13
ENGINE BREAK-IN & ENGINE SETTING 引擎磨合＆設定 ▸▸14
SHOCK ADJUSTMENT 避震器懸吊調整 ▸▸15
STORING AND MAINTENANCE 儲存及保養 ▸▸15
MAINTENANCE AFTER RUNNING 車體保養 ▸▸15
BEFORE OPERATING 操控前準備 ▸▸15
DRIVING TIPS 駕駛的小技巧 ▸▸16
SET-UP ▸▸17
TROUBLESHOOTING 常見問題與解決辦法 ▸▸18

IMPORTANT NOTES & WARNING 重要注意事項

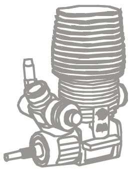
FUEL 燃油



1. Choose a fuel from a reputable, brand name company that is approved for car/truck use. Do not use airplane or boat fuels in your car/truck. Never use gasoline in a glow model engine.
2. Fuel color is for identification purpose only and is not important to performance or durability of your engine.
3. Always store fuel in a well ventilated place, away from heating devices, open flames, direct sunlight, or batteries. Keep glow fuel away from children. Always keep your fuel bottle closed when not in use.
4. Do not dispose of fuel or empty fuel containers in a fire. It may possibly cause fire or explosion.

1. 請選擇具品牌知名度且經過認可、標準的遙控車專用燃油。模型專用燃油以甲醇為主，內含硝基甲烷10%~30%，合成或半合成潤滑油約5%~18%，一般車用燃油建議以含20%硝基甲烷比例的燃油，較為適中。請勿使用一般汽車用燃油於模型專用引擎上。
2. 燃油的顏色主要是辨識用，對於引擎的性能及耐久性並無影響。
3. 儲存燃油時請置放於通風良好的地方,遠離熱源、高溫電器用品或蓄電池，並儘量避免陽光直射。燃油不用時請儲藏於幼兒無法接觸之處並請隨時關緊瓶蓋。
4. 勿將燃油及燃油空瓶接近火源，高溫可能會引起爆炸起火的危險。

ENGINE 引擎



1. For proper engine break-in procedure, please refer to the manual of your engine.
2. Never run your vehicle without the air filter .If the vehicle will be operated in an area with fine dust, use filter oil or caster oil on the air filter element. It is important that the foam is only moist to trap dirt and allow air passage. With the foam too wet, limited air can pass through; therefore, limiting engine performance.
3. The parts around engine could be dangerously hot after operation. Do not touch it without any protection!

1. 引擎的磨合步驟，請參考引擎手冊。
2. 引擎沒裝空氣濾清器，請勿發動引擎。在有粉塵的場地操作車輛時，空氣濾清器棉需加入空氣濾清器油或蓖麻油，用以吸附粉塵。空濾油加入空濾棉中需適量。太多，會影響引擎進氣效率，引擎性能會受到限制。太少，粉塵容易進入引擎內部，造成損壞。
3. 車輛操作過後，引擎及排氣管的溫度很高，請勿接觸這些危險部位。

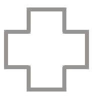
OPERATION 遙控系統



1. Choose the right place to operate your R/C model. Do not run on public streets or highways. This could cause serious accidents, personal injuries, and/or property damage. Never run R/C models near people or animals. To avoid injury, do not run in confined spaces. Do not run where loud noises can disturb others, such as hospitals and residential areas. Never run indoors. There is a high risk of fire and/or damage.
2. Inspect your model before operation. Make sure all the screws are properly tightened and all the parts are checked after running the car for a long period of time. Always use fresh batteries for your transmitter and for your receiver to avoid losing control of the model. Always test the brakes and the throttle before starting your engine to avoid losing control of the model.
3. Check your radio frequency with the proper operating frequency of the area or country. Always check to see if there are any modelers operating on the same frequency as yours. Also, check your radio for proper operation before operating a model.
4. Do not touch any part of the model that rotates.

1. 請勿於雨天、公衆空間、道路、機場附近與其他限制遙控模型活動區域，操控本項產品。
2. 車輛操作前，請檢查電池電量是否充足，巡檢車輛上之所有螺絲是否鎖緊，零件是否鬆動，並測試煞車及油門裝置是否正常以免發生失控情形。
3. 請您確認您所在地區對於頻率規定之相關法規，來選用適當的頻率。避免與其他同好使用相同頻率造成失控事件。
4. 請勿將手指或任何物品接觸正在轉動的裝置。

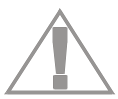
FIRST AID 安全注意事項



1. If you drink nitro fuel by accident, immediately drink large quantities of water and try to induce vomiting. Consult with physician right after then.
2. If the nitro fuel gets into your eyes, rinse them well with water. Consult with physician right after then.
3. If the fuel gets onto your skin, wash it well with soap and water.

1. 如果您誤食燃油，請立即喝下大量的水稀釋且立即催吐，並立即送醫檢查。
2. 如果眼睛不慎接觸到燃油，請立即以清水沖洗，並送醫檢查。
3. 如果燃油接觸到皮膚，請以肥皂及清水洗淨。

WARNING 警告



1. Improper operations may cause personal and/or property damage. Thunder Tiger and its distributor have no control over damage resulting from shipping, improper construction, or improper usage.
2. Thunder Tiger assumes and accepts no responsibility for personal and/or property damages resulting from the use of improper building materials, equipment and operations. By the act of assembling or operating this product, the user accepts all resulting liability. If the buyer is not prepared to accept this liability, then he/she should return this kit in new, unassembled, and unused condition to the place of purchase.

1. 本產品為高性能模型產品非一般玩具，組裝與操作過程皆須由成人陪同。請詳讀此本使用說明書，避免因組裝錯誤與操作不當造成損壞。
2. 此項產品具有相當之危險性，於組裝、調整、操控上的不熟悉都可能造成自身或他人的傷害，當發生這些傷害事件時，製造商及其經銷商是可以免除責任的。建議您於初次使用本產品前，先行請教具有相當程度經驗同好或是專業雷虎經銷商與模型專賣店。

ITEMS REQUIRED FOR OPERATION 周邊配件

RTR CONTENTS 完成車輛配備

2-Channel Surface or Pistol Radio
with Standard Servo.
2動作發射機、接收機及伺服機





EQUIPMENT NEEDED 需求配件

(Not included in the kit 不包含在此套件內)



Fuel Bottle
加油壺



Glow Fuel, Methanol 10% to 30%
Nitro 5% to 18% Caster / Synthetic Oil
模型專用燃料(含10%~30%硝
基甲烷、5%~18%潤滑油)



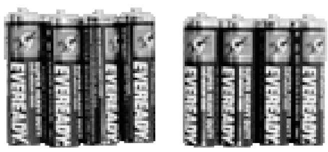
Screw Drivers, Lexan Body Reamer, Hobby Knife, Lexan Scissors.
十字起子、一字起子、挖孔器、車殼剪、美工刀



Glow Starter w/ Charger
電夾及充電器



*AA Rechargeable Ni-MH battery 4 pieces for receiver
接收機用電池



AA Alkaline dry batteries 8 pieces for transmitter
發射機用電池

TOOLS INCLUDED 附屬工具



Hex Wrench Set, 1.5mm / 2.0mm / 2.5mm / 3.0mm
六角扳手, 1.5mm / 2.0mm / 2.5mm / 3.0mm



5-Way Wrench
六角螺帽套筒扳手

1 CHARGING THE GLOW PLUG IGNITER 電夾充電方式



a. Plug the charger into an AC outlet, and then pull on the igniter lever to accept the charging adapter.
b. At this point, the small red LED indicator on the charger should light up indicating the charging sequence is in progress.
c. When the charging complete, pull on the glow plug igniter lever to unplug the glow igniter. Charge the new glow plug igniter for 16 to 24 hours on the first charge. For subsequent charges, charge it about 12 hours before next use.

NOTE:
If the igniter gets warm or hot during the charge, unplug the igniter from charger immediately. A warm / hot igniter means the igniter is overcharged. Overcharging can damage the internal battery in the igniter; thus, shortening its life.

a. 將充電器插入家用110V插座中，再接上電夾
b. 充電過程中，紅色LED燈會保持亮的狀態，如不亮表示為短路，電池無法充電
c. 充電完成，將充電器自插座拔下，再分開電夾；新電夾首次充電時間需16到20小時，之後只需充大約12小時即可

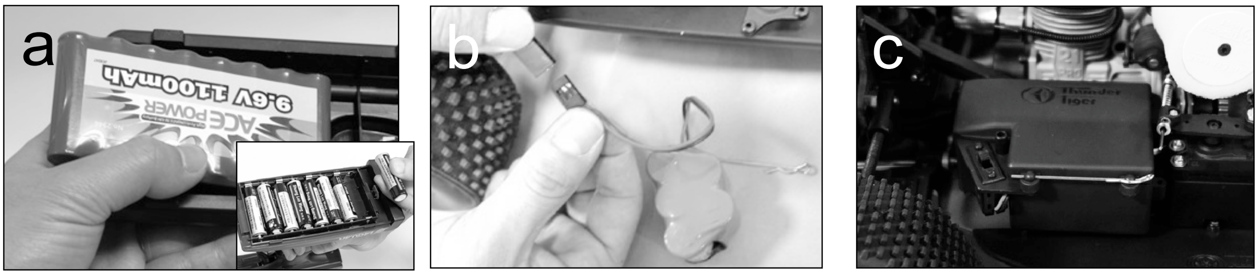
注意：
充電過程中，電夾電池如出現高溫現象(40~45°C)，表示已過度充電，需立即停止充電。過度充電容易造成電池損壞，更可能產生爆炸起火，請謹慎使用。

2 INSTALLING TIRES 輪胎安裝



a. Use the supplied wrench to install all 4 tires/wheels.
b. Apply the supplied wheel nuts onto the hex adapter.
c. Turn the wrench to tighten the wheel nuts.
a. 將輪胎裝入六角輪座。
b. 鎖上六角螺帽。
c. 用內附的扳手鎖緊螺帽。

3 RADIO BATTERY INSTALLATION 遙控器電池安裝



a. Install 8 AA size alkaline batteries into transmitter.
b. Install 4 AA size alkaline batteries in receiver battery box to the receiver switch.
c. Install the battery into the receiver box, secure the box with a body clip.

a. 安裝8顆3號電池於發射機上，請注意正負極正確安裝方向。
b. 連接接收機電源線、開關線。
c. 將接收機電池安裝於接收盒中並使用R型插銷固定。

4 The ACE RC Cougar PS3 2.4GHz Radio System
熟悉2.4GHz電控系統



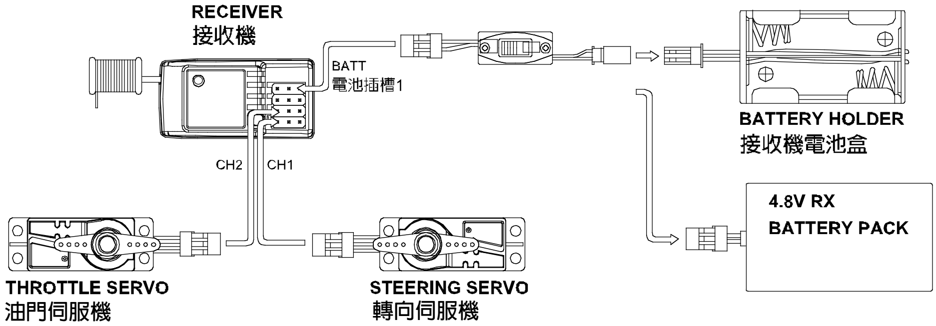
1. Transmitter Antenna
   發射機天線
2. Battery Level Indicator
   發射機電池電壓指示燈
3. HI/LO Throttle ATV(Adjustable Travel Volume)
   高、低速油門行程調整鈕
4. Servo reversing switches
   正逆轉設定裝置
5. Steering Trim
   轉向微調鈕
6. Throttle Trim
   油門微調鈕
7. Steering D/R (Dual Rates)
   轉向大小動調整鈕
8. AUX Ch Button
   第三動開關
9. External Charging Jack
   充電孔
10. 發射校頻配對設定鈕
    2.4GHz binding SW
11. Steering Wheel
    轉向舵輪
12. Power Switch
    電源開關
13. Throttle Trigger
    油門控制扳機
14. Steering Tension Adjustment
    轉向舵輪調整螺絲
15. Battery Cover
    電池蓋

TRANSMITTER CONTROLS

1. **Transmitter Antenna:** Straighten up the antenna before operating the model.
2. **Battery Level Indicator:** Three LEDs indicate the battery voltage level. If the Red LED flashes, please replace the batteries.
3. **HI/LO Throttle ATV (Adjustable Travel Volume):** Provides the function to let you independently preset the maximum travel of the throttle servo either side (high / low) of neutral.
4. **Servo reversing switches:** To reverse the servo's rotation direction at the flip of the switch. The reversing switches are recessed into the transmitter to prevent accidental operation.
5. **Steering Trim:** Adjusts the steering in small increments or decrements to run the model straight.
6. **Throttle Trim:** Adjusts the throttle in small increments or decrements to shift the neutral position.
7. **Steering D/R (Dual Rates):** Push this lever left or right to adjust the amount of the steering dual rate. Right to increase dual rate amount and left to decrease the amount.
8. **AUX Ch Button:** Provides an extra function for the control of the model.
9. **External Charging Jack:** For rechargeable NiCd/NiHM battery pack on the transmitter only.
10. **2.4GHz binding SW:** The Binding SW button is located on the back of the 2.4GHz transmitter. For additional details, please refer to the “Binding” setting procedure (Page 7).
11. **Steering Wheel:** Controls the steering of the model.
12. **Power Switch:** Sliding to turn the transmitter on or off.
13. **Throttle Trigger:** pulled or pushed to control the movement of the model.
14. **Steering Tension Adjustment:** Use a Phillip type screwdriver to tighten or loosen the tension of the steering wheel.
15. **Battery Cover:** Slide cover to install or remove batteries.

發射機各部功能簡介

1. **發射機天線**：操作發射機時，請將發射機天線扳直。
2. **發射機電源顯示燈**：三顆LED設計顯示發射機電池殘量，若紅色LED燈閃爍時，請更換發射機電池。
3. **高、低速油門行程調整鈕**：獨立調整高、低速油門行程量功能。
4. **正逆轉設定裝置**：於發射機背面（如圖示），控制伺服機作動方向。
5. **轉向微調鈕**：利用此旋鈕，調整設定轉向正確中立點位置。
6. **油門微調鈕**：利用此旋鈕，調整設定油門正確中立點位置。
7. **轉向大小動調整鈕**：調整轉向伺服機的行程量。
8. **第三動開關**：第三動功能開關鈕
9. **充電孔**：使用充電式電池時，可利用此充電孔，進行充電工作。
10. 2.4GHz **校頻配對設定鈕**: 發射機背面為2.4GHz之BINDING SW校頻配對設定鈕，為配對發射/接收頻率之用。更多功能設定方式請參考說明書第7頁“校頻配對步驟”。
11. **轉向舵輪**：控制車輛轉向裝置
12. **電源開關**：發射機電源開關
13. **油門控制板機**：控制車輛前進或後退的裝置
14. **轉向輪調整螺絲**：使用小型十字起子調整此調整螺絲來改變轉向輪旋轉鬆緊度。
15. **電池蓋**



5 BINDING PROCESS 安全校頻配對(鎖碼)

A binding feature is included in the ACE RC Cougar 2.4GHz spread spectrum system to ensure the transmitter and receiver bind properly and prevent interference from other controllers. To manually bind Tx/Rx, please proceed as per the following steps:

a. Press and hold the “Binding SW” button on the back side of the transmitter while turning on the transmitter.
b. Release the “Binding SW” button after the green LED flashes indicating the transmitter is binding.
c. Press and hold the bind button on the receiver while turning on the receiver. Binding process will then start automatically.The LED will turn green/reed flash on the receiver.
d. Release the “Binding SW” button. Successful binding is confirmed by the binding LED changing from a quick blinking and then remain solid on the transmitter. The LED will turn green on the receiver. Once binding is complete, the system will automatically connect.

Note: Binding process may take 3~10 seconds to execute. If binding fails, the LED on the receiver will turn red. Please turn off the power and repeat the steps from a) ~d).

ACE RC Cougar PS3採用最先進的專用3動2.4GHz無限展頻遙控系統。這個系統結合發射與接收可以互動溝通模式，跳動頻道搜尋，使得整體無線遙控系統的傳輸展現精準穩定的特性同時也無須擔心頻率干擾的問題。如發現無法操控情形發生，需要重新校頻配對，請依照下列步驟重新進行校頻配對程序：

a. 打開發射機電源時，同時持續按壓發射機背面之 "Binding SW" 按鈕。
b. 直到按鈕旁之LED綠燈快速閃爍，再放開 "Binding SW" 按鈕，表示發射機正在進行自動搜尋校頻，此時請不要關閉發射機電源。
c. 然後按壓接收機上之 "Binding SW" 按鈕並同時開啓接收機電源，此時接收機將自動進行校頻配對程序。接收機LED燈號為紅綠快速閃爍。
d. 放開"Binding SW" ，一旦完成配對程序，發射機LED燈號會從綠色快速閃爍轉換成持續綠色燈號，接收機LED燈號將從紅色轉換為綠色。此時表示接收機與發射機已完成配對溝通，可以進行操控。

注意 遙控系統校頻配對可能需要3~10秒執行程序。如果程序執行錯誤，發射及接收模組的LED燈號將持續呈現紅色。請關閉電源再依a)~d)的順序重新操作配對程序。

Step 步驟	TX Action 動作	RX Action 動作	LED 燈號
a		No Action 無須動作	–
b		No Action 無須動作	TX LED：GREEN FLASH TX 燈號：綠燈快速閃爍
c	No Action 無須動作		RX LED：GREEN/RED FLASH RX 燈號：綠/紅燈快速閃爍
d	No Action 無須動作		TX LED： GREEN FLASH-->GREEN SOLID RX LED： RED SOLID-->GREEN SOLID TX 燈號： 綠燈快速閃爍-->綠燈恆亮 RX 燈號： 紅燈恆亮-->綠燈恆亮

6 FAIL SAFE(F/S) FUNCTION SETTING 安全回復功能設定

ACE RC COUGAR 2.4GHz R/C system features a built-in Failsafe function to automatically set a servo command if the receiver loses the signal from transmitter due to interference. For safety, we strongly recommend to active the FAILSAFE function on your Cougar R/C system.

Setting up the Failsafe (F/S) Function:

a. After binding the transmitter and receiver, you can continually set up the F/S function. Turn on the transmitter power and then receiver power.
b. Press and hold the “Binding SW” button on the receiver for 10 seconds. The LED will start flashing GREEN on the receiver.

⚠**CAUTION:** Do not release the “Binding SW” button on the receiver until STEP C is completed.

c. Move and hold the throttle trigger to the position you want the control to be in if a failsafe condition should occur. First, keep steering wheel at neutral position（steering servo at neutral position）. To set up F/S function with the throttle servo position at "Brake", first push the trigger to the brake position and hold. To set up F/S function with servo position at "Neutral", keep the trigger at neutral position.

⚠**NOTE:** Always set the throttle trigger to neutral or full brake position and steering servo to neutral position in case of any unexpected control error!

Factory pre-settings for RC car F/S function are :

- Electric Car- Steering servo at neutral, throttle at neutral.
- Nitro Car- Steering servo at neutral, throttle at iddle and car brakes.

d. After the Step C, release the “Binding SW” button on the receiver first and then the throttle trigger. The LED turns to solid “RED” and then back to solid “GREEN” indicating the F/S function has now been activated.
e. Test by turning off your transmitter and watching the servo failsafe position activate.
F/S at "Neutral" : To check the fail safe is working properly, by moving the throttle trigger to the full forward (full brake), hold this position and then turn off the transmitter. The F/S function should move the throttle servo to “Neutral” position and the steering servo to “Neutral” position.
F/S at "Brake" : To check the fail safe is working properly, by keeping the throttle trigger at neutral and then turn off the transmitter. The F/S function should move the throttle servo to “Brake” position and the steering servo to “Neutral” position.
f. If the F/S function fails or need to change the F/S hold position, repeat the steps a) ~e). After the F/S is completed, you can start normal operation.

⚠**CAUTION:** ALWAYS reset FAILSAFE function after binding your transmitter & receiver.

ACE RC COUGAR 2.4GHz 遙控系統內建安全回復功能，可設定當接收機因干擾或斷電而失去發射機訊號時，伺服機自動回復製預設位置。安全起見，強烈建議您務必啓用安全回復功能。

安全回復功能設定

a. 設定此功能前請先完成系統發射與接收之對頻。確定後，先打開發射機再開接收機電源。
b. 壓著接收機對頻開關，約10秒鐘後LED會變為綠色快速閃爍。表示進入F/S設定模式。

⚠注意 C步驟完成前不要放開接收機對頻鍵。

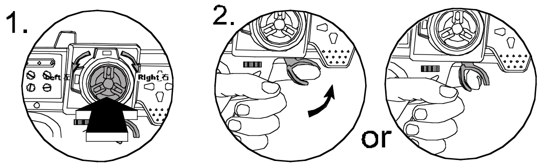
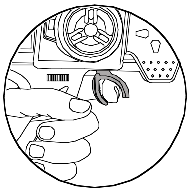
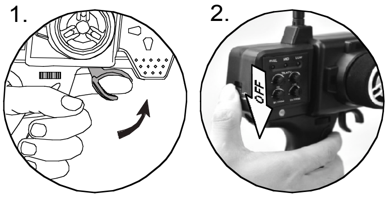
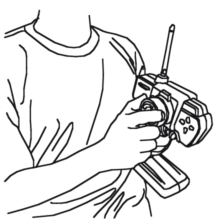
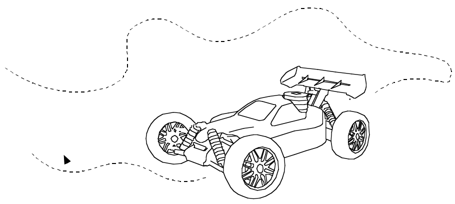
c. 同時移動油門扳機至您想要設定F/S伺服機位置。轉向舵輪請保持中立點位置。
【如想要設定F/S油門伺服機位置為煞車，需先移動油門扳機至煞車位置不要鬆開。】
【如想要設定F/S油門伺服機位置為中立，請保持油門扳機在中立點位置。】

⚠注意 油門伺服機安全回復位置建議設定為煞車或中立點，請勿設定為油門開啓位置，以免發生危險。本系統出廠預設F/S功能如下:

- 電車-轉向伺服機位置在中立點，速控器油門在靜止中立點。
- 油車-轉向伺服機位置在中立點，油門伺服機在怠速位置。

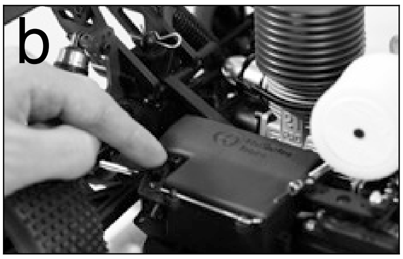
d. 此時你可以放開接收機對頻鍵，然後再放開發射機油門板機。LED會變為恆亮紅燈，約2秒後又回到恆亮綠燈，此時表示F/S功能已經設定完成。
e. 檢查動作：
F/S油門伺服機位置設定為中立點: 將油門扳機全煞車，關掉發射機電源，檢視F/S伺服機位置動作是否轉回中立點位置。
F/S油門伺服機位置設定為煞車: 油門扳機保持中立點，關掉發射機電源，檢視F/S伺服機位置動作是否轉回煞車位置。
f. 檢查無誤後，開發射機開關，然後接收機關開始操作。

⚠注意 重新對頻後，請務必重新設定安全回復功能。

Step 步驟	TX Action 動作	RX Action 動作	Check 確認
a	Binding Complete 完成對頻	Binding Complete 完成對頻	TX LED：GREEN SOLID RX LED：GREEN SOLID TX燈號：綠燈恆亮 RX燈號：綠燈恆亮
b	No Action 無須動作		RX LED：GREEN FLASH RX 燈號：綠燈快速閃爍
c d	1. Steering: Neutral 2. Keep brake or trigger at neutral 1.轉向中立 2.保持煞車或油門扳機在中立點位置 1. 2. or 	No Action 無須動作	**Pre-settings for F/S function:** EP Car :Steering at Neutral / ESC at Neutral GP Car :Steering at Neutral / Carb. at Iddle **出廠預設F/S功能：** ■電車： 轉向朝前，速控器煞車 ■油車： 轉向朝前，油門關閉(怠速)
e	Release later 後放開 		RX LED：RED SOLID-2s->GREEN SOLID RX燈號： 紅燈恆亮-2秒->綠燈恆亮
f	1. Keep brake 2. Swithch Off 1. 保持煞車 2. 關發射機 1. 2. 	No Action 無須動作	F/S function activates 安全回復功能啓用
	OK!  		

7 RADIO OPERATION 遙控器操作





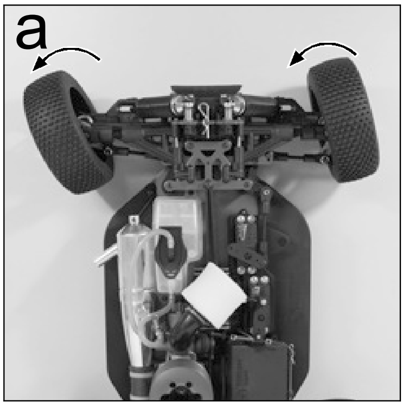


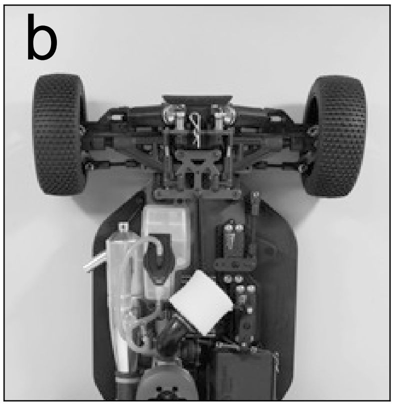
a. When turning radio system on. Turn the transmitter on first, then turn on the ESC.
b. When turning the radio system off. Turn the ESC off first, then turn off the transmitter.
c. Servo Reversing:It is sometimes necessary or convenient to reverse the output direction of the servo. The direction of the rotation for each individual servo can be changed by simply flipping the reversing switch that corresponds to the channel number on the receiver where the servo is plugged in. Under normal circumstances, Ch1 is steering, Ch2 is throttle, and Ch3 is for extra function.Using the reversing switches as needed.

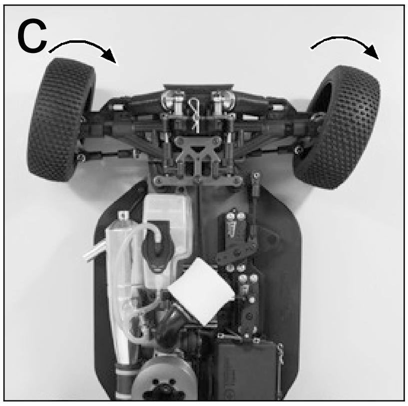
Caution: Do not run the transmitter's battery flat or you will lose control of the car. For additional details, please refer to the transmitter instruction manual.

a. 為避免車子失控暴衝，先開啓發射機電源。
b. 接著開啓速控器電源。電源的關閉則是相反的順序，先關速控器電源，再關發射機電源。
c. 伺服機正逆轉設定功能
伺服機有時因為實際需要，或因為方便性而需要改變伺服機擺臂的旋轉方向，這時可利用遙控器上的正逆轉設定來調整。每一個獨立的伺服機均有獨立的設定功能，可依實際需求來獨立設定。一般來說CH1為轉向伺服機、CH2為油門伺服機、CH3為三動遙控器增加功能。

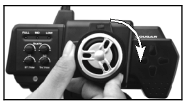
8 OPERATING RADIO STEERING FUNCTION 遙控器設定－轉向







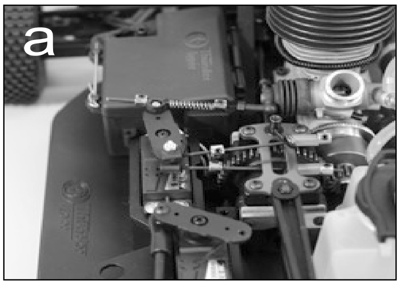




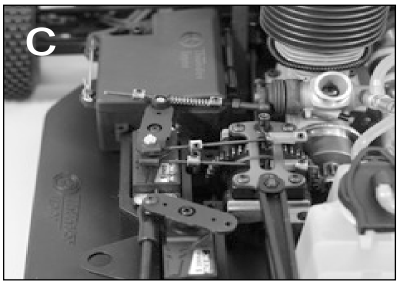
a. Check the radio steering functions. With the radio transmitter and receiver on, turn the steering wheel to the left. The front tires/wheels should turn left accordingly. If not, flip the steering servo reverse switch.
b. Return the steering wheel to neutral. The front tires/wheels should point straight forward. If not, use the steering trim lever to correct it.
c. Turn the steering wheel to the right. The front tires/wheels should turn right accordingly.

a. 確認轉向功能。打開發射機及接收機電源，方向轉左邊時，輪胎將朝向左邊，若方向不一致，請調整方向的正逆轉開關。
b. 方向舵回中立點時，前輪應筆直向前，若有偏差，請調整方向舵微調旋鈕。
c. 方向舵轉向右邊時，前輪應轉向右邊。

9 OPERATING RADIO THROTTLE/ BRAKE FUNCTION
遙控器設定－油門、中立、煞車









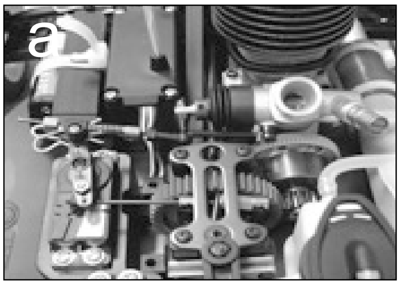


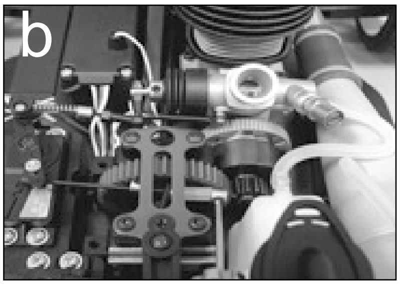


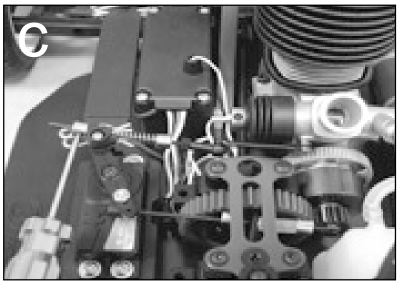
a. Check the radio throttle/brake functions. With the radio transmitter and receiver on, pull the trigger / push the stick forward. The carburetor should be fully opened and the brake disengaged. To reverse this function, flip the throttle/brake servo reverse switch.
b. Return the trigger / stick to neutral. The carburetor should be closed to a point where the idle has been set (see step 8 for settings), and the brake still disengaged. If not, use the throttle/brake trim lever to correct it.
c. Push the trigger / pull the stick backward. The carburetor opening should still be the same at neutral, throttle spring compressed slightly, and the brake engaged.

a. 確認油門、煞車功能。請先將發射機與接收機電源開關打開，以檢查油門、煞車作動是否正常作動。將油門板機(桿)向內拉上推到底時，化油器應完全開啓，煞車脫離（可輕輕轉動輪子，確認煞車是否完全脫離），若方向不一致，請調整油門的正逆轉開關。
b. 將油門板機(桿)推回中立點時，化油器應關閉至定點，煞車仍為脫離狀態；若狀態有所偏差，請調整油門微調鈕。(油門、煞車連桿的正確設定，請參考步驟8)
c. 油門板機(桿)向煞車方向推時，化油器應關閉至定點，但煞車須為鎖死狀態。

10 ADJUSTING THROTTLE / BRAKE LINKAGE
油門及煞車連桿調整





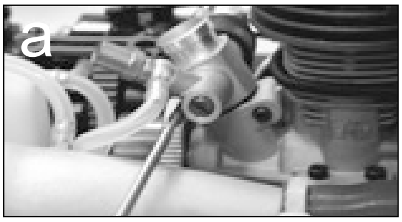


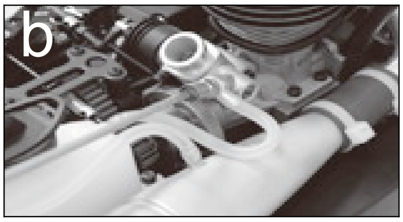


a. To set the throttle/brake linkage, first the radio should be on and neutral; thus, the servo is at neutral position.
b. With the servo at neutral, turn and adjust plastic brake adjustment nut at the end of the linkage until there is a 1/16"(1.5mm) gap between the spring and the brake lever when the spring is not compressed. (The brake lever should almost engages the brake system, but not yet.)
c. With the servo at neutral, using a 1.5mm Allen wrench driver to loosen the throttle collars. Then, manually close the carburetor, and set the forward collar (next to the spring) with the spring slightly compressed. Then, set the other collar (rearward) next to the linkage pivot.

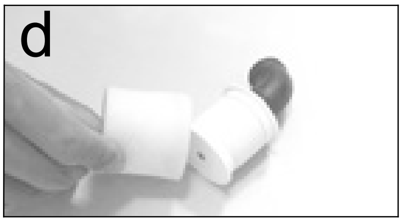
a. 設定油門與煞車連桿，第一步驟應確認發射機與接收機電源開啓，伺服機與所有撥桿應位於中立點。
b. 保持油門伺服機位於中立點狀態，調整煞車連桿至彈簧與煞車撥桿保持1.5mm間隙（彈簧處於不受壓縮狀態），並且煞車幾乎咬合的狀態加以固定。
c. 保持油門伺服機位於中立點狀態，轉鬆油門拉桿固定螺絲，手動關閉化油器，固定拉桿上之螺絲（保持彈簧為輕度壓縮狀態），再固定另一側螺絲。

11 ADJUSTING CARBURETOR 化油器調整

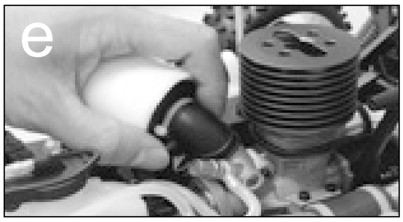












a. To set the high speed needle: (large needle sticking out from the carburetor body), turn the screw as pictured. Initial high speed needle setting should be 3~3.5 turns (close the needle completely, then back out 3~3.5 turns). Clockwise turn will provide leaner setting (lower fuel to air mixture), and counterclockwise turn will provide richer setting (higher fuel to air mixture).

b. To set the carburetor idle: (small needle sticking out from the carburetor body), turn the screw as pictured. Initial idle setting should leave 1mm carburetor gap. Clockwise turn will provide higher idle (larger carburetor opening), and counterclockwise turn will provide lower idle (smaller carburetor opening). For more details about the engine setting, please refer to ENGINE BREAK-IN/SETTING procedures to properly set the engine.

c. To set the low speed needle: (The low-speed mixture screw is located in the end of the carburetor). turn the screw as pictured. This screw controls how much fuel enters the engine at idle and low throttle. This adjustment will smooth the idle and improve the acceleration to mid speed. Make this adjustment with the throttle closed, after setting the idle. Turn the screw clockwise gently until it bottoms out. DO NOT over tighten. Now turn the low-speed mixture screw counter-clock 6 1/2 turns.

d. Remove the outer foam from filter and make it moist evenly with a few drops of fuel. Put the filter in a plastic bag and knead it until the foam is saturated, but not soaked.

e. Finally, make sure the air cleaner boot is securely fastened with a zip-tie.

Never run your vehicle without the air filter .If the vehicle will be operated in an area with fine dust, use filter oil or caster oil instead of fuel. It is important that the foam is only moist to trap dirt and allow air passage. With the foam too wet, limited air can pass through; therefore, limiting engine performance.

a. 高速油針調整：調整高速油針（突出於化油器本體之較大螺絲），如圖示。於調整前應先保持油針於開啓3~3.5圈的位置（油針完全鎖緊後再鬆開3~3.5圈）。高速油針順時針旋轉，化油器將會呈現較為貧油設定；逆時針旋轉將會呈現較為富油設定。請參考引擎使用手冊來設定您愛車的引擎。

b. 怠速設定：設定引擎怠速轉速用螺絲，突出於化油器本體之較小螺絲（如b圖示），於調整前注意化油器應保持1mm的開口。怠速螺絲順時針旋轉，怠速轉速提高；逆時針旋轉，怠速轉速降低。請參考引擎磨合建議來設定您愛車的引擎。

c. 低速油針調整：調整低速油針時需卸下上半部車殼（低速油針位於化油器本體末端），如c圖示。於調整前應先保持油針於開啓6.5圈的位置（油針完全鎖緊後再鬆開6.5圈）。正確調整此油針可讓怠速與中低速更加順暢，調整此油針時需將油門關閉，以及怠速設定完成後。

d. 原廠搭配的高性能空氣濾清器，建議您於使用前於濾清器上塗抹適量濾清器專用油，可加強過濾粉塵，避免進入化油器造成引擎損壞。

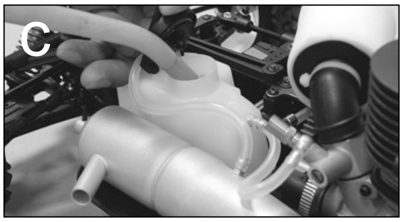
e. 最後確認固定濾清器之束帶是否確實綁緊。

引擎請勿於未安裝空氣濾清器情況下運轉，並且注意濾清器的清潔工作，以避免造成引擎的損壞與壽命簡短。建議使用適當的濾清器專用油，強化過濾的功能。

12 FUELLING 燃油的添加







a. Remove the cap from fuel bottle nozzle.

b. Squeeze the fuel bottle, insert into fuel, and draw fuel into the fuel bottle. The fuel used should be methanol based model engine glow fuel (available at hobby shops) with 10% to 30% nitro content and 5% to 18% caster/synthetic oil content for lubrication.

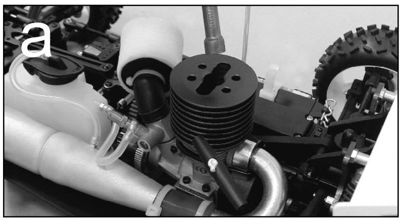
c. Fill car's fuel tank with glow fuel.

a. 移開注油器上之封蓋。

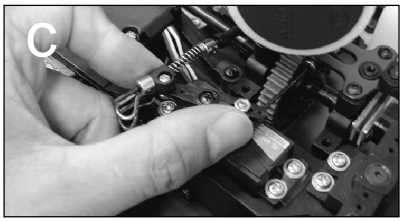
b. 擠壓注油器將桶裝燃油吸入注油器內。

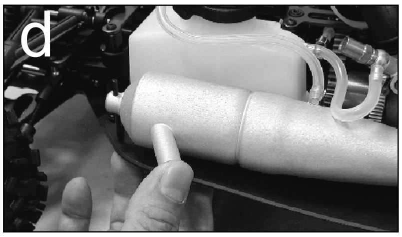
c. 打開油箱上蓋，擠壓注油器將燃油注入油箱內。

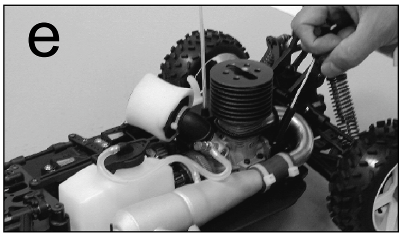
13 PREPARING THE ENGINE FOR STARTING 引擎整備工作

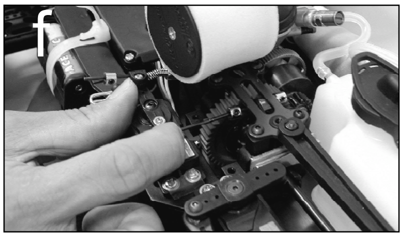












a. To start an engine, first remove the glow plug with the included wrench.

b. Check the glow plug by plugging it into the glow plug igniter. The glow plug element should light up brightly. If it lights up dimly, then the glow plug igniter is low (and it needs recharging). If it doesn't light up, or the plug element looks distorted, then the glow plug is bad (replace with new one). After checking, reinstall the glow plug.

The glow plug used for this engine can be: Thunder Tiger 9281, McCoy #9 / #59, Novarossi C4S / C5S / C6S,OS #8 / #A3 / #A5, and Picco P6S / P7S.

c. With the radio off, manually turn the servo to open the carburetor (open throttle).

d. Plug the tuned pipe exhaust tip.

e. Keeping the exhaust tip plugged, pull on the engine's starter. Keep doing it until fuel reaches engine's carburetor, then pull it 3 more times to prime the engine.

f. Manually return the servo back to neutral.

a. 首次啓動引擎前，請使用扳手將火星塞卸下。

b. 將火星塞塞入電夾内檢查，若火星塞呈現明亮、紅熱的現象表示正常，若火星塞無法正常點火，請將電夾充飽電再檢查一次；如果仍無法正常點火，請更換電夾或火星塞，再檢查一次。確認無誤後，將火星塞裝回引擎。

本引擎可適用於下列火星塞：雷虎No.9281, McCoy #9 / #59, Novarossi C4S / C5S / C6S,OS #8 / #A3 / #A5, and Picco P6S / P7S.

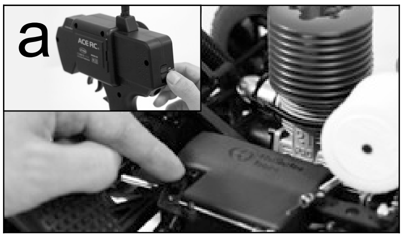
c. 關掉遙控器電源，用手移動油門伺服器片，打開化油器節氣閥。

d. 塞住加速管排氣口。

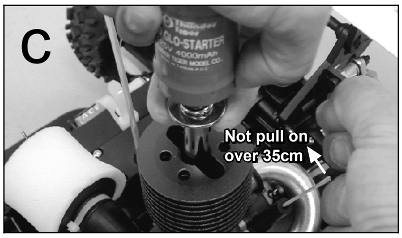
e. 拉手拉器3~4次，將燃油自油箱吸到化油器裡。

f. 用手移動油門伺服器片，關閉化油器節氣閥。

14 STARTING THE ENGINE 發動引擎







a. Turn on the radio (transmitter first, then receiver).

b. Clip the glow plug igniter onto engine's glow plug.

c. Pull on the engine starter, release, repeat until the engine starts. Throttle maybe required to be opened momentarily, but release back to neutral immediately after it starts.

Remove the glow plug igniter from engine after engine has started and warmed up. If the engine stops right after the igniter is removed, the carburetor setting is too rich. Please refer to engine setting section.

If engine starter becomes hard to pull, the engine maybe flooded. To unflood an engine, remove the glow plug from engine, flip the car upside down, and pull on the starter to release excess fuel. Then, reinstall the glow plug and repeat the engine starting procedure.

a. 打開遙控器電源(先打開發射機電源，再開接收機電源)。

b. 將電夾接上引擎的火星塞。

c. 拉動手拉器啓動引擎。油門微調可稍微提高一些，方便引擎的啓動。注意：手拉器拉出之長度必須保持在20~35公分之内，不可超過35公分，避免將手拉器繩索拉出過長，造成損壞。

當引擎發動達到工作溫度後，將電夾移開。假如引擎立刻熄火，表示引擎設定過於富油，請參考引擎設定單元，調整出最佳設定。

假如引擎很難拉動，甚至拉不動，表示引擎已呈現積油狀態，請先將火星塞拆下，拉動手拉器數次，排油後裝回火星塞，重新啓動引擎。

15 ENGINE BREAK-IN 引擎磨合

For a new engine (break-in setting), the high speed needle needs to be set as rich as possible. Turn the high speed needle 1/4 turn counterclockwise from initial setting (3~3.5 turns from fully closed). Repeat step 15b. Keep doing this until the engine stalls at full throttle, then turn the high speed needle 1/4 turn clockwise. Run the car in an open parking lot with this rich engine setting for at least 5 tanks of fuel to complete the break-in process. It is normal for new engines to stall many times during this time due to the rich setting. When it does, just restart the engine. After break-in, follow the engine setting procedure to set the carburetor for normal operations.

磨合新引擎時，需將高速油針盡可能設定在富油的狀態。從原廠設定好之高速油針位置（約3~3.5圈），每次逆時針退出1/4圈(全油門狀態下)，直到引擎因富油而熄火；再將高速油針順時針轉進1/4圈。重新發動引擎，並保持此設定下(富油、全油門狀態下)，磨合引擎約5桶油（車上之油箱），完成引擎磨合工作（引擎進行磨合時，因油針設定較為富油，常常會發生引擎熄火的正常現象，重新發動引擎即可）。
完成引擎磨合工作後，請參照下述引擎設定步驟，設定您愛車的引擎。

ENGINE SETTING 引擎設定

Due to different fuel formula, operating elevation, humidity . . . etc. The engine may / may not operate properly at initial setting. Please follow the following procedure to achieve proper carburetor setting. Do not perform this procedure until the engine has been properly broken in.

a. Start the engine.

b. With a running engine, run the car back and foreth in a straight line (full throttle achieved during each passage) in an open parking lot. Repeat, and note the sound of the exhaust. Do not hold the throttle open with car off the ground or the engine connect rod may break.

c. If the exhaust does not reach a high pitch note, turn the high speed needle (long needle, extending from carburetor, pointing up) 1/4 turn clockwise, and repeat step 15b.

If the exhaust reaches a high pitch note immediately, turn the high speed needle 1/4 turn counterclockwise, and repeat step 15b.

d. Repeat step 15c until the engine reaches optimum setting (turning in the high speed needle will no longer have an effect at full throttle and turning out the needle will cause the engine's full throttle rpm to drop a little).

For normal operations, turn the high speed needle 1/4 turn counterclockwise from the optimum high speed needle setting.

e. To set the idle, turn the idle screw in (higher rpm) or out (lower rpm).

Basically, the idle needs to be set at the lowest possible point before the engine stalls.

f. To set the low speed needle (larger needle on the side of carburetor body), the engine needs to be broken-in and high speed needle needs to be set first.

g. Repeating step 15b every 10 seconds (1 second of full throttle and 10 seconds of idle). If the engine rpm at idle drops after a few seconds and stalls, then turn in the low speed needle (clockwise) 1/4 turn. If the engine rpm stays the same or goes up at idle, then turn out the low speed needle (counterclockwise) 1/4 turn.

h. Keep repeating step 15g until the engine rpm drops (goes to idle rpm, then drops a few more rpm after a few seconds) but does not stall at idle.

引擎因使用之燃油配方不同、操作習慣、氣候等影響，必須適時調整設定化油氣器，以保持引擎正常運作。
注意：引擎設定工作開始前，必需完成引擎磨合工作。

a. 發動引擎

b. 於空曠安全的場地，重複進行直線來回的動作(適時將油門全開)，調整高速(主)油針，並注意排氣管聲浪的變化。當車子在瞬間離地的狀態時，油門需放開，否則容易損傷活塞連桿。

c. 若無法達到高速行走，請每次順時針轉進高速(主)油針1/8~1/4圈，再重複15b步驟。若引擎已達到高速行走，而產生吸不到油汽的間斷現象，請每次逆時針退出高速(主)油針1/8~1/4圈，再重複15b步驟。

d. 重複步驟15b、15c完成高速(主)油針最佳設定（順時針旋轉主油針，引擎轉速反應會提高，逆時針旋轉主油針，引擎轉速少許降低）。在一般情況下使用引擎，請將高速(主)油針從最佳設定點退出1/4圈，可提高引擎使用壽命。

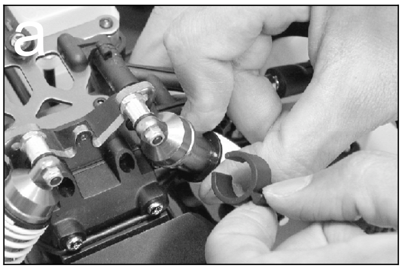
e. 設定怠速時，請利用怠速螺絲設定，順時針轉進為提高怠速，逆時針轉出為降低怠速。在引擎不熄火狀態下，儘可能將引擎怠速設定在最低點(不熄火)。

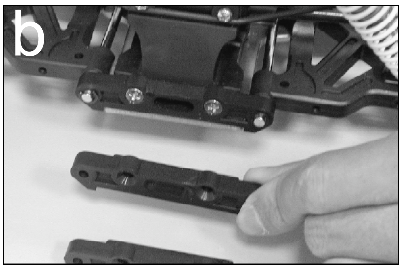
f. 設定低速(副)油針時，需完成引擎磨合以及高速油針設定後進行。

g. 重複步驟15b每十秒鐘一個循環（一秒全油門、10秒怠速）。若引擎於怠速時轉速下降並熄火，順時針旋轉低速油針1/8圈；若引擎於怠速時轉速上升且偏高，逆時針旋轉低速油針1/8圈。

h. 重複步驟15g，設定低速(副)油針及引擎正常怠速運作時之最低轉速(不熄火)。

16 SHOCK ADJUSTMENT 避震器懸吊調整





a. Use the included shock clips to adjust for spring pre-load. Pressing the entire car down, release, and the car should return to ride height (indicated on set-up page). More pre-load clips will produce higher ride height, and less clips will produce lower ride height. Amount of clips used to front and rear shocks can be different, but clips should be the same for the left and right.

b. Use the included plastic toe-in plates to adjust for rear toe-in. The toe-in angles are indicated on each plates.

a. 使用內附的調整環，調整車身高度。將車身下壓觸地後放開，如太低則增加調整環，如太高則減少調整環。一般調整至下擺臂呈水平狀態即可，更詳細的調整方式請參考設定表。

b. 使用內附的投影版調整toe-in角度，套件內含多種角度的投影版可供調整需要的角度。

17 STORING AND MAINTENANCE 儲存及保養

a. Before storing you car, draw out any fuel from the tank.
b. Next, restart the engine to combust remaining fuel.
c. Unplug the glow plug and put after engine oil inside the engine, re-plug the glow plug.
d. Wipe off the dirt and oil on your car.
e. Make sure you have disconnected the power (batteries).

a. 遙控車長時間不使用時請先使用注油壺將燃油吸乾。
b. 然後重新發動引擎將引擎內剩餘燃油完全燃燒。
c. 將火星塞取下並使用引擎潤滑油保養引擎內活塞，重新裝上火星塞。
d. 清除車體及車殼上之油污。
e. 再次確認電源線(電池)處於非連結狀態。

18 MAINTENANCE AFTER RUNNING 車體保養

a. Always turn off the radio system and disconnect the battery pack when the car is not in use.
b. Remove the sand, mud, dirt, and any other elements completely from the car before you store it.
c. Never use chemicals or any solvents to clean the chassis as it may cause damage to the electronics components and plastic parts as well. Use compressed air, soft paintbrush, or toothbrush to clean dust and dirt.

a. 結束操控儲存車體前，請謹記要關閉電源並將電池接頭拔除以免電池短路造成不必要之危險。
b. 清潔車體上所沾附之沙塵、泥屑。
c. 請勿使用化學清潔劑來清洗底板，以免遙控之電子設備受潮、電線、焊點及塑膠件被侵蝕而導致不必要之損壞。 清潔車體時，請儘量使用強力之壓縮空氣搭配軟毛刷來請清理車體上所沾附之沙塵、泥屑。

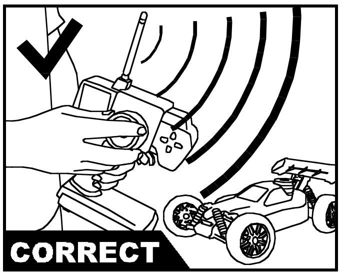
19 BEFORE OPERATING 操控前準備

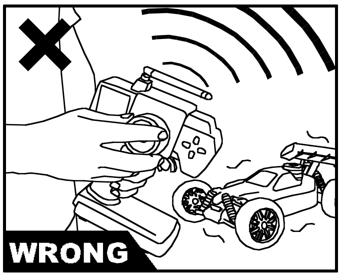
For best operating range, always ensure the largest section of your transmitter antenna faces the model.

⚠ **Warning! Operating range may be significantly reduced with the transmitter antenna pointing directly at the model!**

以天線最大面積對正模型，可獲得最佳的遙控距離。

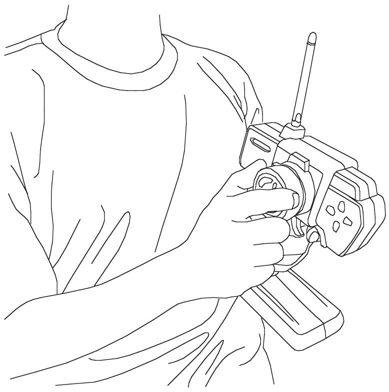
⚠ **警告！天線頂端直指模型會嚴重縮短遙控距離！**



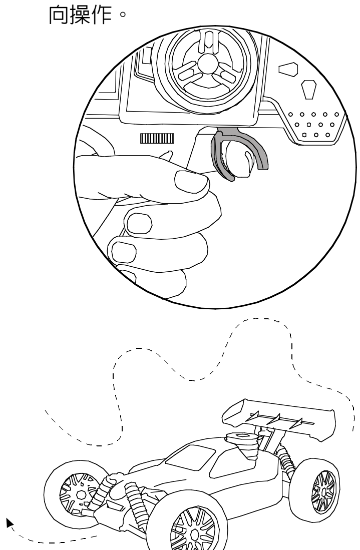


20 DRIVING TIPS 駕駛的小技巧

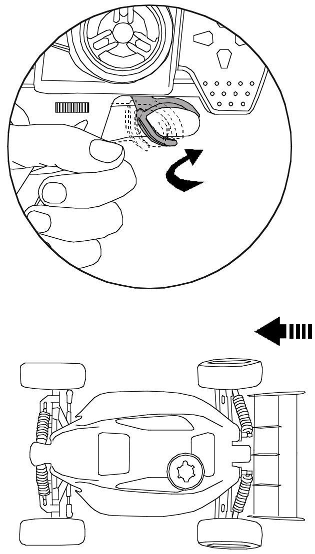
a. Hold your elbows in and keep the transmitter antenna pointing straight up.
a. 手持發射機時請將雙肘靠緊身體並保持發射機天線朝上。



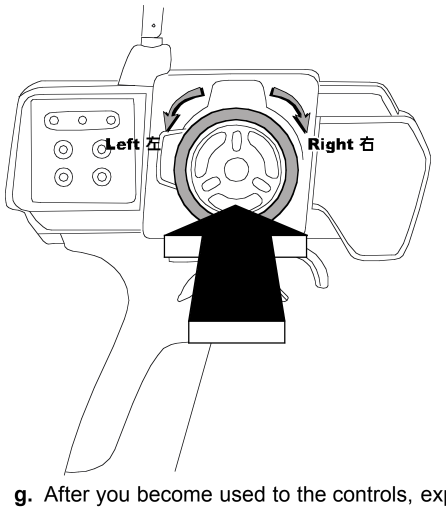
b. Squeeze the throttle trigger or pull the throttle stick gently and steer the car to left and right.
b. 開始操控前按扣油門板機(油門拉桿)時請緩慢增加油門並試著熟悉前輪轉向操作。



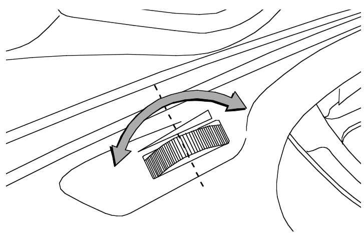
c. Squeeze the throttle trigger and release. Repeat this action to control car speed.
c. 初學者請先熟悉油門操控再慢慢加快車子行進速度。



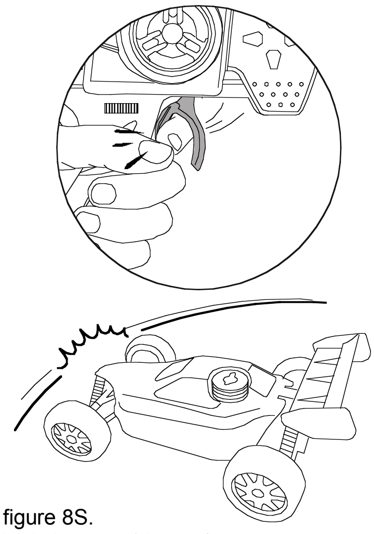
d. If you are of unsure of the steering direction, practice with the transmitter facing towards you.
d. 假設你不確定發射機的轉向，將發射機轉輪面向自己，先熟悉左右轉向。



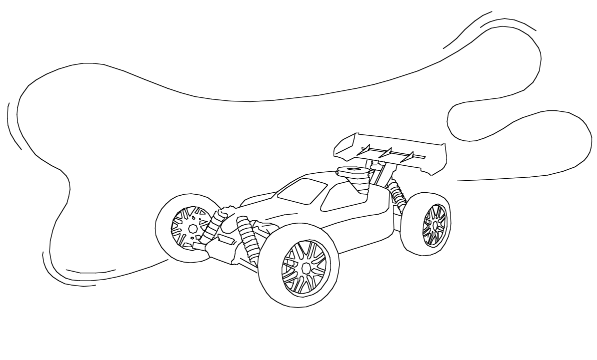
e. At first, set the steering D/R function for less steering response.
e. 初學者可參考發射機說明書調整D/R功能，以避免轉向太過靈活不易操控。



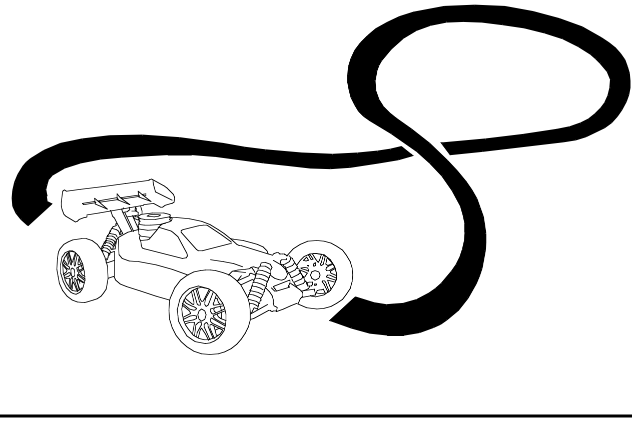
f. Be careful not to squeeze the throttle trigger abruptly while steering.
f. 轉向時請勿將油門全開以避免速度過快導致失控翻覆。



g. After you become used to the controls, experiment with high performance possible at full throttle and full steering.
g. 熟悉前述基本操控後再試著將油門全開進行高速操控。

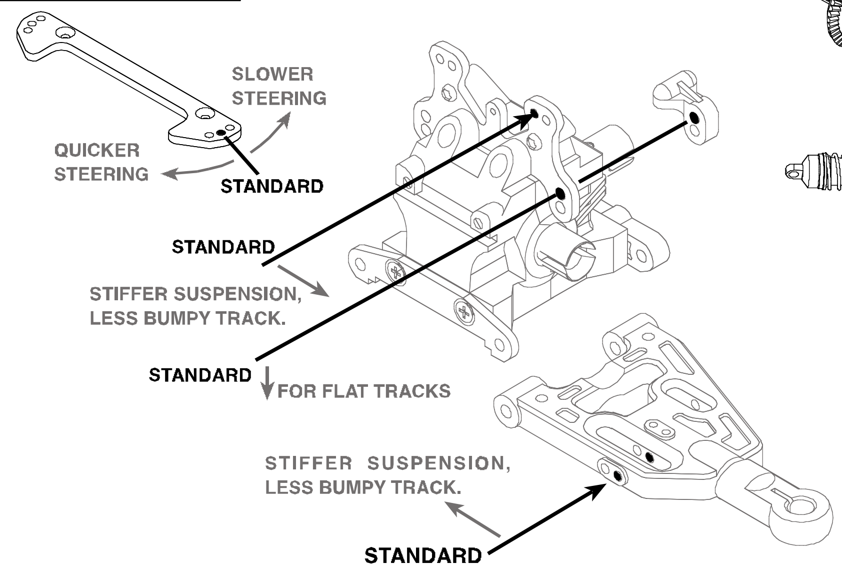


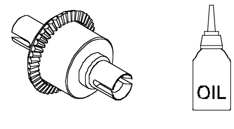
h. Practice doing figure 8S.
h. 建議可以使用繞8字來熟悉發射機操控動作。



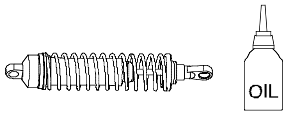
SET-UP

FRONT





3000 MORE STEERING
5000 STANDARD
10000 LESS STEERING

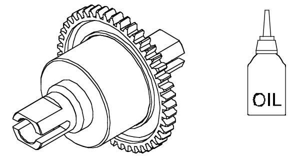


STANDARD
350 400 450

CAMBER	-2Ż More +, more steering More -, less steering
CASTER	18Ż More +, less steering More -, more steering
TOE	0Ż Toe-in, corners wide under power Toe-out, corners close under power
RIDE HEIGHT **MAX HEIGHT**	24mm (floor to chassis) 45mm (floor to chassis)

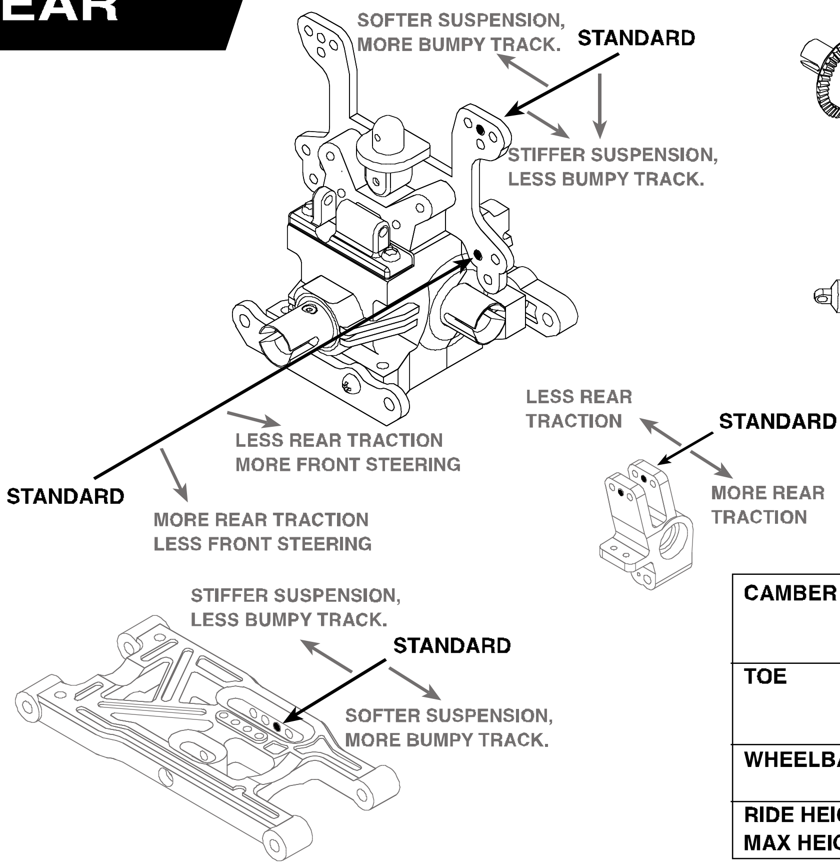
CENTER

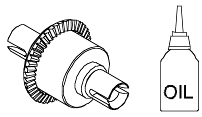
BRAKE BIAS	40% front / 60% rear



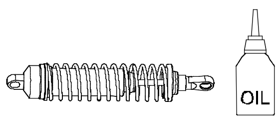
5000 STANDARD
10000~20000 QUICK ACCELERATION
(TRACK SUFACE MUST HAVE GOOD TRACTION)

REAR





100 STANDARD
OR USE BEARING GREASE & REMOVE O-RINGS



STANDARD
250 300 350

CAMBER	-2Ż More +, less traction More -, more traction
TOE	2ŻToe-in More toe-in, more rear traction, less speed Less toe-in, less rear traction, more speed
WHEELBASE	320mm Longer, more stable through bumpy surface
RIDE HEIGHT **MAX HEIGHT**	24mm (floor to chassis) 53mm (floor to chassis)

TROUBLESHOOTING 常見問題與解決辦法

If you have trouble starting or keeping your EB4 S2 running, here's a quick checklist of what to look for first.
如果您的 **EB4 S2** 有引擎及行駛上的問題，您可以參考下表的說明。如果問題無法解決，請與原購買經銷商聯絡。

Description 問題	Problem 可能原因	Solution 解決方法
Engine will not start 引擎無法啓動	Out of fuel 油箱沒油	Fill fuel tank 加油
	Contaminated fuel 燃油過期	Replace fuel 更換新油
	Glow plug igniter not charged 電夾沒電	Charge glow igniter 請將電夾充電
	Glow plug bad 火星塞故障	Replace glow plug, see "Glow Plug Problems" section below. 更換火星塞
	Fuel not getting to carburetor 燃油未進入化油器	Open and close fuel tank lid twice. 塞住油箱回壓管，拉開並瞬間放開油箱上蓋幾次，將燃油壓進化油器
	Engine flooded 引擎積油	See "Flooding" section below. 將火星塞拆開，進行排油步驟後，再裝回引擎，重新發動
	Engine overheating 引擎過熱	Allow engine to cool, richen fuel mixture, see "Fuel Mixture" section below 待引擎冷卻後，重新調整引擎至富油狀態
	Carburetor incorrectly adjusted 化油器調整不當	Re-adjust carburetor, see "Fuel Mixture" or "Factory Carburetor Settings" section below. 重新調整引擎，參考引擎調整步驟
	Exhaust blocked 排氣不順暢	Check exhaust, remove blockage. 檢查排氣系統，將阻塞物移除
	Air cleaner blocked 空氣濾清器阻塞	Check air cleaner, remove blockage. 清洗或更換空氣濾棉
Engine starts, then stalls 引擎容易熄火	Idle speed set to low 怠速太低	Adjust idle speed screw, see "Fuel Mixture" section below. 將怠速調高
	Air bubbles in fuel line 油管有空氣跑入	Check for leaks in fuel line 檢查漏氣部位予以更換
	Glow plug is fouled 火星塞效率不佳	Replace glow plug, see "Glow Plug Problems" Section below. 更換火星塞
Starter rope will not pull 手拉器無法拉動	Engine is flooded 引擎積油	See "Flooding" section below. 將火星塞拆開，進行排油步驟後，再裝回引擎，重新發動
	Engine is seized 引擎卡死	Examine engine for damage 詳細檢查引擎是否損壞

Glow Plug Problems. 火星塞問題



The glow plug in your engine must be replaced periodically to maintain peak performance and easy starting. Most starting problems or erratic performance can be traced back to the glow plug. The easiest way to check for a faulty glow plug is to simply install a new one and see if the problem is corrected. However, to test the glow plug, remove the glow plug form the cylinder head with a 5/16" nut driver (make sure there is no dirt on top of the head which could fall into the engine. Do not lose the copper gasket which seals the glow plug.)
Connect the glow plug to the glow igniter. All of the coils should glow bright white. Sometimes, the first few coils will not glow, while the rest are bright orange. This indicates a bad glow plug or low igniter battery. Try recharging the igniter, or replacing the glow plug.

為維持引擎的性能及易於啓動，火星塞需定期更換。啓動困難及影響引擎性能的原因，大部分都是火星塞故障，最簡單的測試方法，就是更換新的火星塞試試看。火星塞的拆裝請使用8㎜的套筒扳手(拆裝前請先確認火星塞孔周圍是乾淨的，火星塞墊片勿弄丟)。將火星塞接上電夾，所有的電熱絲應該呈現炙熱的狀態。若剛夾上電夾，前幾圈電熱絲未立刻呈現炙熱狀態，過一下子才呈現橘色亮光，這表示火星塞已故障了或電夾沒電了，請更換火星塞或將電夾充電。

Flooding 引擎積油

Symptoms of a flooded engine include difficulty in starting, muffled sounds coming from the exhaust, pull starter won't operate, and excess fuel draining from the exhaust outlet. Remove the glow plug with a 5/16" nut driver and also remove the air cleaner. Turn the car upside down and pull the starter a couple of times to drain the excess fuel out of the engine and carburetor. Re-install the glow plug and try starting again.

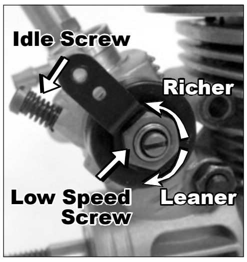
如果出現以下狀況，表示引擎積油了：啓動困難、無排氣聲音、手拉器無法拉動、多餘未燃燒的燃油自排氣管排出。這時候需進行排油步驟，拆下火星塞及空氣濾清器，將車子側傾一邊，拉動手拉器幾下，將積油排出。最後，裝回火星塞及空氣濾清器，重新啓動。

Fuel Mixture 燃油混合比

The fuel mixture is controlled by three different adjustments on the carburetor, and should come preset from the factory (see photos below). Your engine should start and run slightly rich with these settings (rich is good for break-in). **Tuning Tip:** Always make sure you can see some exhaust smoke coming out of the exhaust outlet during operation. This is a good sign that enough fuel is getting to the engine.

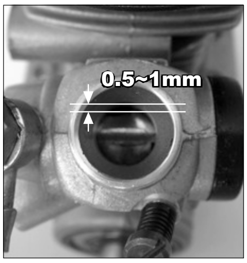
燃油混合比的調整，由化油器的三個部分所控制，原廠設定値請參考右圖所示。建議您的引擎設定値，可以此為基準再稍微富油一些，以維持引擎壽命。**引擎調整小秘訣：**永遠保持排氣管可看到白煙排出，這表示引擎是處於正常運轉的狀態，引擎可發揮其性能又可延長壽命。

Factory Carburetor Settings. 原廠設定値



Low speed mixture
$6^{1/2}$ turns out
Clockwise=Leaner
Counterclockwise-Richer

中低速混合比：
$6^{1/2}$ 圈 (鎖到底退回)
順時針=貧油
逆時針=富油



Idle speed:
0.5~1mm)
Adjust Idle Screw until
0.5~1mm is obtained.

怠速：
開口調整為0.5~1mm



High speed mixture:
$3^{1/2}$ turns out
Clockwise = Leaner
Counterclockwise-Richer

高速混合比：
$3^{1/2}$ 圈 (鎖到底退回)
順時針=貧油
逆時針=富油